



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/857,767	06/11/2001	Phillip S. Wilson	P281421	9618

909 7590 09/20/2004

PILLSBURY WINTHROP, LLP  
P.O. BOX 10500  
MCLEAN, VA 22102

EXAMINER
----------

OMGBA, ESSAMA

ART UNIT	PAPER NUMBER
----------	--------------

3726

DATE MAILED: 09/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/857,767	<b>Applicant(s)</b> WILSON, PHILLIP S. <span style="float: right;">CP</span>	
	<b>Examiner</b> Essama Omgba	<b>Art Unit</b> 3726	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 June 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 14-16 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13 is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sugawara et al. (US patent 5,527,581) in view of Bagrodia et al. (US Patent 6,337,046) and Tsipursky et al. (US Patent 5,849,830) or Li et al. (US Patent 6,060,549).

Sugawara et al. discloses a method for blow molding large parts using parisons reinforced with inorganic filler or glass fiber, see column 2, lines 32-47, column 3, lines 3-7 and 64-67 and column 4, lines 1-50. Sugawara et al. does not disclose the reinforcement particles comprising less than 15% of a total volume of a plastic melt, at least 50% of the reinforcing particles having a thickness of less than 20 nanometers, and at least 99% of the reinforcement particles having a thickness of less than about 30 nanometers. However Bagrodia et al. teaches a plastic melt used in blow molding containers wherein the plastic melt is reinforced with particles having a thickness of less than 2 nanometers, wherein the reinforcement particles representing from about 0.5 to about 20 weight percent of the composite melt, see column 3, lines 5-15. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have reinforced the parison of Sugawara et al. with reinforcement particles as taught by Bagrodia et al., instead of the conventional inorganic fillers or glass fibers, in

Art Unit: 3726

order to provide a cost-effective method of producing articles made from nanocomposite compositions, the articles being suited for use in applications requiring molded parts.

Although Bagrodia et al. is silent on the use of such nanocomposite compositions for automotive parts, however it is known to use such compositions for automotive parts as attested by Tsipursky et al., see column 1, lines 46-56 or Li et al., see column 8, lines 43-50. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have used the nanocomposite compositions of Sugawara et al./Bagrodia et al. to manufacture automotive parts, in light of the teachings of Tsipursky et al. or Li et al., in order to provide articles with improved high impact strength.

Applicant should note that 100% of the reinforcement particles of Bagrodia et al. are less than 30 nanometers. Also with the reinforcement particles representing from about 0.5 to about 20 weight percent of the composite melt, it would have been obvious to one of ordinary skill in the art at the time the invention was made that the reinforcement particles would comprise less than 15% of the total volume of the plastic melt. Applicant should also note that the various blow molding steps recited in the claim are conventional in the art and the blow molded part of Sugawara et al. weighs at least 2 pounds and has a total surface area of at least 400 sq. inches.

3. Claims 2-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugawara et al./Bagrodia et al./Tsipursky et al./Li et al. as applied to claim 1 above, and further in view of Noba et al. (JP 410244889).

With regards to claims 2 and 3, Sugawara et al./Bagrodia et al./Tsipursky et al./Li et al. discloses a method for blow molding large parts such as interior support panels for

Art Unit: 3726

automobiles as shown above. Although Sugawara et al./Bagrodia et al./ Tsipursky et al./Li et al. does not disclose the part being an integrally formed radiator and light support structure, however it is known to mold a radiator support structure that includes a radiator frame section with apertures to secure a motor vehicle radiator to the support structure with light receiving recesses with light receiving apertures 11 for securing lights to the support structure, the lights comprising head lights as attested by Noba et al., see abstract and figures 1 and 3-6. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have blow molded a radiator and light support structure using the method of Sugawara et al./Bagrodia et al./Tsipursky et al./Li et al., in light of the teachings of Noba et al., in order to efficiently manufacture the radiator support structure and save on cost of manufacture.

For claim 4, Applicant should note that it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included recesses constructed to mount parking lights and other elements of a front fascia of an automobile.

For claims 5 and 6, Applicant should note that forming the apertures in the frame or the recesses after the part is removed from the mold assembly is an obvious matter of design choice wherein no stated problem is solved or unexpected results obtained in forming the apertures in the frame or in the recesses after the part is removed from the mold assembly versus forming them during the molding process as disclosed by Noba et al.

Art Unit: 3726

For claim 7, Applicant should note that the radiator support structure is conventionally nestingly disposed with respect to a front fascia of a motor vehicle.

4. Claims 8-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugawara et al./Bagrodia et al./Tsipursky et al./Li et al. as applied to claim 1 above, and further in view of Petrelli (US Patent 5,000,333) and Plant (US Patent 5,649,587).

Sugawara et al./Bagrodia et al./Tsipursky et al./Li et al. discloses a method for molding large parts as shown above except for the part being a substantially hollow bumper for a motor vehicle, the interior of the bumper communicating with a fluid consuming component of the motor vehicle wherein the bumper is filled with fluid to serve as a fluid reservoir for the fluid consuming component. However Petrelli teaches a bumper 11 with a washer fluid reservoir 18 in the bumper, see figure 1 for example. Although Petrelli uses a separate reservoir for the washer fluid, it is however known to blow mold vehicle hollow components such as radiator fan shrouds, which serve as reservoirs for fluids such as coolant fluid, or washer fluids as attested by Plant, see column 1, lines 5-9, and 30-50 and figures 1 and 5. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have blow molded the part of Sugawara et al./Bagrodia et al./Tsipursky et al./Li et al. as a hollow bumper with fluid reservoirs, in light of the teachings of Petrelli and Plant, in order to save space in the engine compartment and save on manufacturing cost by combining plural parts.

5. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Li et al.

Art Unit: 3726

Li et al. discloses a method for blow molding various shaped articles such as automotive parts or appliances housing from a reinforced plastic melt comprising thermoplastic material and reinforcement particles dispersed within the thermoplastic material, the reinforcement particles comprising 0.5 to 10 weight percent of the plastic melt with a thickness of 2 nanometers or less, see column 7, lines 4-10 and 43-48 and column 8, lines 43-50. Although Li et al. does not disclose the automotive parts or the appliances housing weighing at least 2 pounds and having a total surface area of at least 400 sq. inches, however it would have been obvious to one of ordinary skill in the art at the time the invention was made that most automotive parts and appliance housings weigh at least two pounds and have a total surface area of at least 400 sq. inches. Applicant should note that with the reinforcement particles representing from about 0.5 to about 10 weight percent of the composite melt, it would have been obvious to one of ordinary skill in the art at the time the invention was made that the reinforcement particles would comprise less than 15% of the total volume of the plastic melt. Applicant should also note that the various blow molding steps recited in the claim are conventional in the art.

6. Claims 2-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li et al. in view of Noba et al.

With regards to claims 2 and 3, Li et al. discloses a method for blow molding large parts such as automotive parts as shown above. Although Sugawara et al./Bagrodia et al./Tsipursky et al./Li et al. does not disclose the part being an integrally formed radiator and light support structure, however it is known to mold a radiator

Art Unit: 3726

support structure that includes a radiator frame section with apertures to secure a motor vehicle radiator to the support structure with light receiving recesses with light receiving apertures 11 for securing lights to the support structure, the lights comprising head lights as attested by Noba et al., see abstract and figures 1 and 3-6. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have blow molded a radiator and light support structure using the method of Li et al., in light of the teachings of Noba et al., in order to efficiently manufacture the radiator support structure and save on cost of manufacture.

For claim 4, Applicant should note that it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included recesses constructed to mount parking lights and other elements of a front fascia of an automobile.

For claims 5 and 6, Applicant should note that forming the apertures in the frame or the recesses after the part is removed from the mold assembly is an obvious matter of design choice wherein no stated problem is solved or unexpected results obtained in forming the apertures in the frame or in the recesses after the part is removed from the mold assembly versus forming them during the molding process as disclosed by Noba et al.

For claim 7, Applicant should note that the radiator support structure is conventionally nestingly disposed with respect to a front fascia of a motor vehicle.

7. Claims 8-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li et al. in view of Petrelli et Plant.



Art Unit: 3726

Li et al. discloses a method for molding large parts as shown above except for the part being a substantially hollow bumper for a motor vehicle, the interior of the bumper communicating with a fluid consuming component of the motor vehicle wherein the bumper is filled with fluid to serve as a fluid reservoir for the fluid consuming component. However Petrelli teaches a bumper 11 with a washer fluid reservoir 18 in the bumper, see figure 1 for example. Although Petrelli uses a separate reservoir for the washer fluid, it is however known to blow mold vehicle hollow components such as radiator fan shrouds, which serve as reservoirs for fluids such as coolant fluid, or washer fluids as attested by Plant, see column 1, lines 5-9, and 30-50 and figures 1 and 5. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have blow molded the part of Li et al. as a hollow bumper with fluid reservoirs, in light of the teachings of Petrelli and Plant, in order to save space in the engine compartment and save on manufacturing cost by combining plural parts.

#### ***Allowable Subject Matter***

8. Claim 13 is allowed.

#### ***Response to Arguments***

9. Applicant's arguments with respect to claims 1-12 have been considered but are moot in view of the new ground(s) of rejection.

Art Unit: 3726

**Conclusion**

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Essama Omgba whose telephone number is (703) 305-2915. The examiner can normally be reached on M-F (10-7:30) First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on (703) 308-1789. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Essama Omgba  
Primary Examiner  
Art Unit 3726

eo  
September 16, 2004